UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,205	05/31/2000	Patrick Chiu	FXPL-01011US0 MCF/KJD	4073

23910 7590 05/05/2005

FLIESLER MEYER, LLP
FOUR EMBARCADERO CENTER
SUITE 400
SAN FRANCISCO, CA 94111

EXAMINER	
YUAN, ALMARI ROMERO	
ART UNIT	**PAPER NUMBER**
2176	

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/584,205	CHIU ET AL.	
	Examiner	Art Unit	
	Almari Yuan	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10 and 12-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10 and 12-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to communications: Request for RCE and Amendment file on 2/22/05.

2. Claim 11 is cancelled. Claims 1-10 and 12-28 are pending. Claims 1, 17, and 21 are independent claims.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/22/05 has been entered.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1-4, 8, 12-13, 16-21, 23-25, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mukhopadhyay et al. ("Passive Capture and Structuring of**

Lectures", 10/1999, ACM Multimedia '99, pages 1-11 (submitted in the IDS filed on 9/14/00)) in view of Mitchell et al. (USPN 5,963,966 – issued on 10/1999).

Regarding independent claim 1 and (dependent claims 13, 23, 25, and 27), Mukhopadhyay discloses:

A method for linking a document to a video (Mukhopadhyay on page 2, right column teaches slides are synchronized with the video; on page 3, left column teaches slides are matched to the video; and on page 10, left column teaches inserting digitized output of scan converters when demonstrations are given), comprising the steps of:

document identifier (Mukhopadhyay on page 5, see figure 7 teaches each slide image are set with a value to match with each video frame);

obtaining a video file having a plurality of video frames (Mukhopadhyay on page 5 teaches video sequence of a plurality of segments);

transforming the plurality of video frames into plurality of respective video frame identifiers (Mukhopadhyay on page 5 teaches matching a representative frame from each segment in T to one of the slides in S; a video sequence comprises a set of time values T);

comparing the document identifier with the plurality of video frame identifiers (Mukhopadhyay on page 5 teaches computing a video sequence of v(t) segments or frames to match against every slide image S (see figure 7)); and

linking the document to a first video frame in the plurality of video frames (Mukhopadhyay on page 5, see figure 7 teaches matching slides in each frame to synchronize video data to the slides).

However, Mukhopadhyay does not explicitly disclose "obtaining a scanned document having margins", "removing margins from scanned documents", "scaling the scanned document", "removing the least significant information", and "transforming the scanned document".

Mitchell discloses "obtaining a scanned document having margins", "removing margins from scanned documents" and "scaling the scanned document" on col. 8, lines 36-43 and col. 9, lines 18-19 teaches document pages are scanned into images; wherein the images are cropped to remove the borders and rescaled; "transforming the scanned document" on col. 6, lines 36-40 teaches translating from paper to electronic form such as SGML, HTML, and text.

Further, Mitchell discloses the new amended feature "removing the least significant information from the scanned document", on col. 8, lines 40-43 teaches since the sample

document pages contain large white borders that do not contribute any information, the images were cropped to remove the borders.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Mitchell into Mukhopadhyay to provide a way to scan document pages into images, as taught by Mitchell, incorporated into the slide image of Mukhopadhyay, in order to provide a low-cost and high performance solution for converting paper into a form that can be accessed through the network such as the Internet or a media such a disk or CD-ROM.

Regarding dependent claim 2, Mitchell discloses scanning a document to create an image on col. 8, lines 36-43.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Mitchell into Mukhopadhyay to provide a way to scan document pages into images, as taught by Mitchell, incorporated into the slide image of Mukhopadhyay, in order to provide a low-cost and high performance solution for converting paper into a form that can be accessed through the network such as the Internet or a media such a disk or CD-ROM.

Regarding dependent claim 3, Mitchell discloses cropping the image from the scanned document to remove the borders on col. 8, lines 36-43.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Mitchell into Mukhopadhyay to provide a way to scan document pages into images, as taught by Mitchell, incorporated into the slide image of Mukhopadhyay, in order to provide a low-cost and high performance solution for converting

paper into a form that can be accessed through the network such as the Internet or a media such a disk or CD-ROM.

Regarding dependent claim 4, Mukhopadhyay discloses a reduced image of the slide displayed on the Lecture Browser user interface to fit the corresponding video within the user interface (see figure 2).

Regarding dependent claims 8 and 19, Mukhopadhyay discloses using a camera to record the presentation on page 2.

Regarding dependent claims 12 and 28, Mukhopadhyay discloses comparing color histograms of successive frames with the slides on page 5, right column – page 6, left column.

Regarding dependent claim 16, Mitchell discloses document images contain hyperlinks on col. 8, lines 60-67.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Mitchell into Mukhopadhyay to provide a way to scan document pages into images, as taught by Mitchell, incorporated into the slide image of Mukhopadhyay, in order to provide a low-cost and high performance solution for converting paper into a form that can be accessed through the network such as the Internet or a media such a disk or CD-ROM.

Regarding independent claims 17 and 21, Mukhopadhyay discloses "link between a document file and a segment of a video file responsive to the comparison of a transformed document and transformed video frame", on page 5, see figure 7 teaches matching slides in each frame to synchronize video data to the slides).

However, Mukhopadhyay does not explicitly disclose "removing the least significant information from the scanned document" and "scanned document".

Mitchell discloses "a scanned document" on col. 8, lines 36-43 and col. 9, lines 18-19 teaches document pages are scanned into images.

Further, Mitchell discloses the new amended feature "removing the least significant information from the scanned document", on col. 8, lines 40-43 teaches since the sample document pages contain large white borders that do not contribute any information, the images were cropped to remove the borders.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Mitchell into Mukhopadhyay to provide a way to scan document pages into images, as taught by Mitchell, incorporated into the slide image of Mukhopadhyay, in order to provide a low-cost and high performance solution for converting paper into a form that can be accessed through the network such as the Internet or a media such a disk or CD-ROM.

Regarding dependent claim 18, Mitchell discloses "a scanner to create scanned document from a physical document", on col. 8, lines 36-43 and col. 9, lines 18-19 teaches document pages are scanned into images using OCR.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Mitchell into Mukhopadhyay to provide a way to scan document pages into images, as taught by Mitchell, incorporated into the slide image of Mukhopadhyay, in order to provide a low-cost and high performance solution for converting

paper into a form that can be accessed through the network such as the Internet or a media such a disk or CD-ROM.

Regarding dependent claim 20, Mukhopadhyay discloses a Lecture Browser user interface for viewing slides and video on page 2, see figure 2.

Regarding dependent claim 24, Mitchell discloses removing borders from the scanned document on col. 8, lines 36-43.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Mitchell into Mukhopadhyay to provide a way to scan document pages into images, as taught by Mitchell, incorporated into the slide image of Mukhopadhyay, in order to provide a low-cost and high performance solution for converting paper into a form that can be accessed through the network such as the Internet or a media such a disk or CD-ROM.

6. **Claims 5-7, 9-10, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mukhopadhyay and Mitchell, as applied to claims 1 and 21 above, further in view of Kumar (USPN 5,835,129 – issued on 11/1998).**

Regarding dependent claims 5-6, 9-10, and 22, Mukhopadhyay and Mitchell disclose the invention substantially as claimed as described *supra*. However, Mukhopadhyay and Mitchell do not explicitly disclose "orthonormal transform" and "discrete cosine transform".

Kumar discloses transformation of the image frame and the process of dividing image frames into blocks using DCT (discrete cosine transform) defined by the orthonormal basis on col. 8, line 60 – col. 9, line 3.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Kumar into Mukhopadhyay and Mitchell to provide the transformation of an image using DCT defined by the orthonormal basis, as taught by Kumar, incorporated into the images of Mukhopadhyay and Mitchell, in order to facilitate the division of image frames into blocks.

Regarding dependent claim 7, Mitchell discloses "removing the least significant information from the scanned document", on col. 8, lines 40-43 teaches since the sample document pages contain large white borders that do not contribute any information, the images were cropped to remove the borders.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Mitchell into Mukhopadhyay to provide a way to scan document pages into images, as taught by Mitchell, incorporated into the slide image of Mukhopadhyay and image of Kumar, in order to provide a low-cost and high performance solution for converting paper into a form that can be accessed through the network such as the Internet or a media such a disk or CD-ROM.

7. **Claims 14-15 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mukhopadhyay and Mitchell, as applied to claims 1 and 21 above, further in view of Bloomberg (USPN 5,181,255 – issued on 01/1993).**

Regarding dependent claims 14-15 and 26, Mukhopadhyay and Mitchell disclose the invention substantially as claimed as described *supra*. However, Mukhopadhyay and Mitchell do not explicitly disclose "extracting handwritten annotations from scanned documents".

Bloomberg discloses extracting handwritten annotations from a scanned image on col. 1, lines 24-33, see Abstract.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Bloomberg into Mukhopadhyay and Mitchell to provide a way to extract handwritten annotations from a scanned image, as taught by Bloomberg, incorporated into the images of Mukhopadhyay and Mitchell, in order to provide an improved system to identify and separate printed text and handwritten annotations from an image.

Response to Arguments

8. Applicant's arguments filed 2/22/05 have been fully considered but they are not persuasive.

The Applicant is advised to cancel dependent claim 7, because independent claims 1, 17, and 21 contains this limitation.

Regarding Applicant's remarks on pages 9-13:

Applicant argues that Mukhopadhyay does not teach "linking a document to a video", however, Mukhopadhyay on page 2, right column, page 3, left column, and page 5, see Figure 7: teaches slides (document) are matched and synchronized with the video, in other words, the slides can be "connected" and related to the video, frame- by-frame.

Applicant argues that Mukhopadhyay does not teach "transforming the scanned document into a scanned document identifier".

Mukhopadhyay discloses each slide image is set with a value or identifier to facilitate the matching of each slide to each video frame (on page 5, see figure 7). Even though, Mukhopadhyay does not disclose the "transformation of the scanned document", Mitchell discloses the translation of paper to an electronic document (col. 6, lines 36-40). Furthermore, Mitchell discloses when the electronic document such as HTML document is created from scanning the paper document, an HTML address (identifier) is used to view the representative document of the scanned HTML document (see col. 7, lines 7-14).

Applicant argues that Mukhopadhyay does not teach "obtaining a video file having a plurality of video frames", however, Mukhopadhyay does disclose "a video file having video frames" on page 5 teaches "...every frame of the overview video and matching each frame against all slide images" and Figure 7 shows a video sequence of a plurality of segments to facilitate the matching to slides. Furthermore, Mukhopadhyay on page 6 teaches methods for computing which slide corresponds to the video frame (See Figure 8).

Applicant argues that Mukhopadhyay, Mitchell, and Kumar do not teach "orthonormal transforms which are performed at once on the entire scanned document".

Kumar discloses the orthonormal transformation on an image frame on col. 8, line 60-col. 9, line 3, however, Kumar's invention can also transform still images, electronic white boards, slides (see col. 4, lines 30-38), in other words, Kumar is not limited to only image frames.

Applicant argues that Mukhopadhyay, Mitchell, and Kumar do not teach "removing the least significant information", however, Mitchell does teach removing the least significant information, on col. 8, lines 36-43 teaches since the sample document pages contain large white borders that do not contribute any information, the images were cropped to remove the borders.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Almari Yuan whose telephone number is 571-272-4104. The examiner can normally be reached on Mondays - Fridays (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild, can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JOSEPH FEILD
SUPERVISORY PATENT EXAMINER

AY
April 29, 2005